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SYNOPSIS OF THE NORTH AMERICAN HYPOCREACEAE, WITH DESCRIPTIONS OF THE SPECIES.

BY J. B. ELLIS AND B. M. EVERHART.

(Continued from page 111.)

109. NECTRIA TREMELLOIDES, E. & E. On bark of dead willow, Plaquemines county, La., July, 1886. Langlois, No. 592.

Perithecia gregarious, ovate, 300 μ in diam., coarsely furfuraceous and subtuberculose-roughened, pale orange, with a distinctly papillose-conic ostiolum; asci about 50 x 7—8 μ, cylindric-clavate, sessile, imperfectly paraphysate; sporidia biseriate, oblong-elliptical, 2-nucleate, becoming 1-septate, 8—12 x 3—4 μ, hyaline. The asci are contracted at the apex into a short truncate apiculus.

110. NECTRIA OCHROLEUCA, Schw. Syn. N. Am., No. 1418. On limbs of various deciduous trees, Carolina and Pennsylvania (Schweinitz). On dead limbs of *Laurus Benzoin*, West Chester, Pa. (Everhart). N. A. F., 773.

Stroma granulose-byssoid, subpulvinate and nearly white at first, becoming firmer and yellowish; perithecia 3—15 on a stroma, ovate-globose, dull yellowish-white, mostly less than one third millim. in diam., surface densely furfuraceo-squamulose, except at the apex, around the rather darker, slightly-depressed, papilliform ostiolum, where the edge of the squamulose coat forms a miniature crown or wreath, giving the apex of the perithecium the appearance of the blossom end of an apple, or sometimes the scaly coating is divided in a substellate-cleft fashion as in some *Valsas;* asci clavate-cylindrical, 45—55 x 10—12 μ; sporidia biseriate, oblong-fusoid, 1-septate, 12—16 x 4—5 μ.

Mr. Wm. C. Stevenson, Jr., has compared the N. A. F., specimens with those in Herb. Schw., and finds them the same.

NOTE.—The portion of description of *Nectria infusaria*, Cke. & Hark. (No. 100), on page 98, beginning in the eighth line as follows : "in a quadrisulcate manner," &c., and continuing to end of same paragraph, was originally intended to form a part of the description of *N. ochroleuca*, Schw., but became misplaced. It should therefore be removed from page 98.

C. *Sporidia pluriseptate.*

111. NECTRIA BALSAMEA, C. & P. Grev. XII, p. 81. On *Abies balsamea*, North Elba, N. Y. (Peck).

" Cæspitose, erumpent, suborbicular ; perithecia small, smooth, scarlet, papillate, at length collapsing, crowded on a pale stroma; asci cylindric-clavate, 8-spored ; sporidia fusiform, 5-septate, hyaline, (.03 x .077 millim.) ".077 " is apparently a typographical error for .0077. The specimens of this species sent us by Prof. Peck are, as stated elsewhere, *N. cucurbitula*, Tode., so that we can only copy the description in *Grevillea*, and this agrees so well with that of *N. cucurbitula*, Fr. (Syll. II, p. 543), that it may reasonably be suspected that this is, in reality, that species and that the measurement of the sporidia, ".03 x .077," is erroneous.

112. NECTRIA AURIGERA, B. & Rav. Grev. IV, p. 46. Rav. Fung. Car. V, 60. Ell., N. A. F., 79. On *Fraxinus* and *Chionanthus*.

Erumpent, cæspitose, stroma pale brick-red, mostly subelliptical, perithecia globose, about one third millim. in diam., covered with a yellow powder ; ostiolum papilliform, collapsing ; asci sublanceolate, 55—60 x 12—15 μ ; sporidia subbiseriate, oblong cylindrical, straight or slightly curved, yellowish, 6—8-septate, 20—24 x 5—6 μ. Var. *flavitecta*, B. & C. (Grev. l. c.), on *Kerria Japonica*, has the " sporidia larger and quadriseptate, sometimes with a gelatinous coat." Probably not distinct from the next.

113. NECTRIA POLYTHALAMA, Berk. Fl. New Zealand II, p. 203. Grev. IV, p. 46.

The specimens of this species in Rav. Fungi Car. III, 54 (on *Fraxinus*), differ from the preceding species only in the absence of the yellow powder on the perithecia. This is also wanting on some specimens of *N. aurigera*, the perithecia, in that case, being of the same dull red as in this species. There is no shadow of difference in the asci and sporidia, at least as the two are represented in Rav. Fungi Car., and if, as there is no reason to doubt, the specimens there distributed are authentic, the two species are the same, and, in that case, the specific name, *polythalama*, would have precedence.

114. NECTRIA CANADENSIS, E. & E. Bull. Torr. Bot. Club XI, p. 74. On bark of dead elm, Ottawa, Canada. Macoun, No. 225 and 311.

Perithecia cæspitose, ovate-globose, $\frac{1}{4}$—$\frac{1}{8}$ millim. in diam., dull red, densely tuberculose-granular ; ostiola not prominent, more or less distinctly stellate-cleft and finally collapsing slightly ; asci sublanceolate, 75—80 x 10—12 μ, without any distinct paraphyses ; sporidia subbiseriate, hyaline, oblong-elliptical, 3-septate, slightly curved, ends obtuse, 18—22 x

7—9 μ. The conidial stage is a *Tubercularia* about two millim. high, bursting out in a seriate manner through cracks in the outer bark, having an orange-red head and brick-red, stipitate base. From the basal or medial part of the stipitate base, perithecia originate and finally entirely surround and overtop the orange-colored heads of conidia, which are either entirely hidden or remain partially visible in the midst of the dense clusters of perithecia; conidia oblong-cylindrical, hyaline, continuous, 5—7 x 2½ μ.

D. *Sporidia muriform.* (*Pleonectria*, Sacc.)

115. NECTRIA BEROLINENSIS, Sacc. Mich. I, p. 123. (*Nectria Ribis*, Niessl., non Tode. *Pleonectria Ribis*, Karst.) On dead stems of *Ribis*. Massachusetts (Farlow), Michigan (Spalding), Wisconsin (Trelease), Canada (Poe).

Perithecia erumpent-superficial, cæspitose, globose-depressed, ⅛—¼ millim. in diam., finally collapsing to cup-shaped, of a brick-red color and loosely-cellular structure; ostiolum not prominent; asci cylindrical, subsessile, 90—115 x 10—14 μ, subtruncate above; sporidia uniseriate, oblong-elliptical, obtuse at each end, 5—7-septate and muriform, not constricted, minutely guttulate, hyaline, 16—22 x 7—8 μ.

We are allowed to add the following notes from Dr. W. G. Farlow, who writes us that No. 6140, collected in Canada by Poe and marked in the Curtis collection, *Nectria fenestrata*, B. & C., but in Grevillea IV, p. 46, referred to *Sphærostilbe pseudotrichia* (Schw.), though evidently the same as the specimens collected by him in Massachusetts and distributed in N. A. F., No. 470, is different from authentic specimens of *Sphæria pseudotrichia*, Schw. (from Surinam), which, besides its peculiar-shaped conidia, has the ascospores larger, about 38 μ, with a crenulated outline.

GEN. VIII, BYSSONECTRIA, Karsten.—Stroma more or less byssoid; perithecia subsuperficial, crowded; sporidia (in the American species) hyaline.

* *Sporidia continuous.*

116. BYSSONECTRIA FIMETI, Ck. Grev. XI, p. 108. Rav. F. Am., 646. On cow dung, Aiken, S. C. (Ravenel).

Perithecia gregarious or scattered, golden yellow, subglobose, seated on a byssoid, golden-yellow stroma, bare and glabrous above, tomentose below; asci cylindrical; sporidia elliptical, continuous, hyaline, 15 x 8 μ.

* * *Sporidia uniseptate.* (*Hyphonectria*).

117. BYSSONECTRIA CHRYSOCOMA, Ck. & Hark. Grev. XII, p. 101. On wood of *Eucalyptus*, California. Harkness, 2321.

Stroma fibrose-byssoid, golden yellow, effused; perithecia gregarious, minute (1—1½ millim.), obovate, thin (tenuibus), dark yellow, semi-immersed in the stroma; asci clavate, 8-spored; sporidia biseriate, narrowly-elliptical, uniseptate, hyaline, 10 x 2—2½ μ.

118. Byssonectria rosella, Ck. & Hark. Grev. l. c. On dead grass, California. Harkness, No. 2441.

Delicate, effused, with a rose-colored tint; hyphæ creeping, interwoven, with the minute, obscure perithecia scattered on it; conidia lunate, like those of *Fusarium*, acute at each end, 5-septate, mostly nodulose and hyaline, 40 x 5—6 μ. Unfortunately, in an immature condition.

Gen. IX, Dialonectria, Sacc. (in part).—Perithecia free, superficial, gregarious or scattered, carnose, glabrous, bright-colored.

A. *Sporidia continuous.* (*Nectriella.*)

119. Dialonectria vulpina, Ck. Grev. XII, p. 83. Ell. N. Am. Fungi, 774. On rotten wood of maple and apple tree, New Jersey and Pennsylvania.

Perithecia gregarious or scattered, light yellow, about one half millim. in diam., globose at first and thinly clothed with short, erect, subglandular hairs and subfurfuraceous, finally collapsing so as to be easily mistaken for a *Peziza;* asci clavate-cylindrical, 35—45 x 6—7 μ, 8-spored; sporidia either biseriate, 8—11 x 3—3½ μ or obliquely uniseriate, 8—12 x 4—4½, elliptical or oblong-elliptical, 2—4-nucleate, with some sporidia in old specimens, becoming uniseptate.

120. Dialonectria mycetophila, Pk. 26th Rep. N. Y. State Mus., p. 85. On decaying fungi, New Scotland, N. Y. (Peck).

"Perithecia crowded or scattered, minute, smooth, subglobose, pale yellow when young, then pinkish-ochre; ostiola minute, papillate, distinct, darker-colored; asci subclavate; sporidia oblong, simple, 12—13 x 4 μ."

B. *Sporidia uniseptate.* (*Eu-Dialonectria.*)

(a.) *Growing on wood or bark.*

121. Dialonectria sanguinea (Sibth.) Fr. Sum. Veg. Scand., p. 388. Fr. S. M. II, p. 453.

Perithecia scattered, adnate, ovoid, rarely subsphæroid; ostiolum papilliform, smooth, blood-red, rarely flesh-color, soft, about 180 μ in diam.; asci cylindrical, 50—60 x 5—6 μ, 8-spored; sporidia obliquely uniseriate, elliptical or subelliptical, unequally 1-septate, slightly constricted, hyaline or with slight tinge of rose-color, 7—10 x 4—5 μ. Common on moist decaying wood and bark of various deciduous trees. Saccardo properly observes that this scarcely differs from *N. episphæria*, Fr., except in its ovoid, scarcely collapsing perithecia and its less distinctly septate sporidia.

122. Dialonectria Peziza (Tode.) Fr. Summ. Veg. Scand., p. 388. On decaying wood and bark. South Carolina (Ravenel), Massachusetts (Murray). See Grev. IV, p. 16.

Perithecia gregarious, superficial, spherical, becoming concave by collapsing, subpapillate, reddish-orange, fading at length, subpilose at base, soft, about one third millim. in diam.; asci very shortly pedicellate, cylindrical or clavate-cylindrical, 80—90 x 8—10 μ when young, subcristate at the apex, 8-spored; sporidia subuniseriate, elliptical, obtuse at each end, uniseptate, but not constricted, each cell nucleate, hyaline, 10—14 x 5—6 μ.

123. DIALONECTRIA TRUNCATA (Ell.) Am. Nat., February, 1883, p. 194. N. A. F., 1332. On the inside of white cedar bark, stripped from the living tree and left lying on the ground. Newfield, N. J., Sept., 1882.

Perithecia gregarious, minute (one eighth to one sixth millim.), flesh-color, subglobose or ovate, the apex flattened into a circular, granular-roughened disk, with the edges lightly projecting; ostiolum in the center of the disk, minute, papilliform, brown; asci sublanceolate, 35 x 5 μ; sporidia biseriate, oblong-fusiform, subhyaline, uniseptate and slightly constricted around the middle, 11—13 x 2½—3 μ.

124. DIALONECTRIA UMBELLULARIÆ (Plow. & Hark.) Trans. Cal. Acad. Sci., 1884, p. 26. On *Umbellularia*, California (Harkness, No. 2882).

Perithecia superficial, scattered, 200—230 μ in diam., globose, subhyaline, with a pale tinge of flesh color, beset with a few hyaline, mycelial threads externally; ostiola obtuse; asci clavate, 50 x 10—15 μ; sporidia hyaline, ovate, uniseptate, 10—12 x 5—8 μ.

(To be continued.)

A NEW GENUS OF MYXOMYCETES.

BY HAROLD WINGATE, PHILADELPHIA, PA.

The following genus comes under the family *Stemonitaceæ*.

ORTHOTRICHA, Wingate, nov. gen.—Sporangium globose; stipe elongated, entering the sporangium as a very short or obsolete columella and then dividing into a few branches at a sharp angle. These branches fork several times, thus forming a capillitium of straight threads. The last branches meet at the surface of sporangium at a very sharp angle by twos or threes, where they are joined together by small membranaceous plates. Wall of the sporangium, with the exception of the plates and a very small collar around the stipe, not apparent.

ORTHOTRICHA MICROCEPHALA, Wingate, sp. nov.—Sporangia globose, very variable in size, from one twelfth to one fourth of a millim. in diameter; stipe elongated, brown or blackish at the base, growing lighter towards the top, more or less translucent, ten to thirty times the diameter of the sporangium in height, tapering, rugose, except at the upper part, where it more or less suddenly becomes a smooth filament, entering the sporangium as a very short, sometimes almost obsolete columella. It then divides into a few (sometimes only two) branches at a sharp angle. These branches fork several times, forming a very loose capillitium of straight threads, the last branches meeting at the surface of the sporangium by twos or threes at a very sharp angle, where their slightly thickened ends are joined together by minute, membranaceous plates. Sporangium wall not apparent, except a slight collar around the stipe as it enters the sporangium; spores brown in mass, very light-violet, almost colorless, under the microscope, perfectly smooth, 7—8 mikrm. in diameter. On rotten logs, Philadelphia, Pa.

Orthotricha microcephala, Wingate.

This plant has been found during three seasons in Fairmont Park, Philadelphia, Pa., in many localities. The plasmodium has a dirty-brown color. When erecting, the dark, granular substance of the mass is left in the matter which is to form the stipe, and the globule of the sporangium becomes milky white. Before the stipe has reached its full height, say in the upper fifth, the sporangium mass leaves behind it, clustered around the stipe, several (2—8) clear, highly-refractive, minute globules, which, in the recently-matured plant, sparkle like dewdrops. The plant continues erecting, but from the place where the globules are left behind, the stipe very frequently suddenly narrows, sometimes to a mere filament. As the plants become old, the dew-like globules become amber-colored, but remain transparent. These clear globules have been occasionally noted by the writer on the sporangium wall of *Comatrichas* and have been considered as an indication of some degree of immaturity, hence they have not been mentioned in the description as having a specific value. In the plants, as found in different places, they are constant, though sometimes fused into one mass. The finer filaments of the capillitium, in fluid under the microscope, are almost colorless. The plants are more or less sociable, sometimes forming patches an inch or so in diameter and may readily be mistaken for a mould.

NOTES ON FLORIDA FUNGI.--No. 9.

BY W. W. CALKINS, CHICAGO, ILLINOIS.

79. PHYLLOSTICA MYRICÆ, Cke.—On leaves of *Myrica* in millions.

80. GIBBERA MORICARPA, Cke.—On bark of dead *Carya*.

81. MELIOLA MANCA, E. & M.—Abundant on leaves of *Quercus*.

82. MELIOLA AMPHITRICA, Fr.—Abundant with the preceding species.

83. MELIOLA FURCATA, Lev.—On leaves of saw palmetto.

84. NECTRIA ERUBESCENS, Desm.—Rare. Found on living leaves of *Osmanthus Americana*, *Myrica cerifera* and *Quercus*, but never abundantly.

85. NECTRIA POLIOSA, E. & E., n. sp.—Parasitic on *Diatrype stigma*. Described in April No. JOURNAL OF MYCOLOGY.

86. HELMINTHOSPORIUM FUMOSUM, E. & M.—On leaves of *Persea Caroliniana*.

87. PEZIZA CHRYSOCOMA, Bull.—Rare on rotten wood.

88. PEZIZA CRATERIUM, Schw.—Rare on rotten limbs.

89. XEROTUS VITICOLA, B. & C. (*X. lateritius*, B. & C.)—This fine species I found in great abundance on dead *Carpinus* in the winter of 1885. Not found on any other wood. During last winter, not one was to be found. Evidently not annual.

90. ASTERINA OLEINA, Cke.—*A. discoidea*, E. & M., *A. pustulata*, E. & M. As Mr. Ellis thinks the two latter may be referred to the above species, I concur. Abundant on various leaves.

91. ASTERINA ORBICULARIS, B. & C.—Abundant on leaves of *Ilex*.

92. ASTERINA ASTEROPHORA, E. & M.—On leaves of *Osmanthus*.

93. ASTERINA STOMATOPHORA, E. & M.—On leaves of *Q. laurifolia*.

94. LENTINUS LE CONTEI, Fr.—Abundant on old logs.

95. LENZITES CORRUGATA, Klot.—Common on fallen limbs.

96. LENZITES SEPIARIA, Fr.—Only on fallen pine logs.

97. LENZITES BETULINA, Fr.—On dead logs.

98. MERULIUS CORIUM, Fr.—Rare on dead limbs.

99. HYPOXYLON ATROPUNCTATUM, Schw.—Common on decayed logs.

100. HYPOXYLON ANNULATUM, Schw.—On dead limbs. Common.

101. HYPOXYLON ANNULATUM, var. *B*.—Common.

102. HYPOXYLON MALLEOLUS, B. & R.—Occasional on dead limbs, but not abundant anywhere.

103. HYPOXYLON HOWEANUM, Pk.—Not common. On a dead limb. Along with it occurs *Sphæria barbirostris*, Desf. Not before detected in the United States until found by Ellis.

104. HYPOXYLON SASSAFRAS, Schw.—Common on dead *S. officinale*.

105. HYPOXYLON EPIPHLŒUM, B. & C.—Common on small dead limbs of *Carpinus*. Have never found it elsewhere.

106. HYPOXYLON TINCTOR, Berk.—A very fine species, frequenting sparely dead magnolia. Invariably stains the wood underneath orange color.

107. HYPOXYLON PUNCTULATUM, B. & R.—Abundant on dead limbs and logs.

108. HYPOXYLON RUBIGINOSUM, Fr.—On dead wood, but not common.

109. HYPOXYLON POLYSPERMUM, Mont.—An elegant species, found occasionally on dead limbs, and generally associated with a *sphæria*.

110. IRPEX FUSCESCENS, Schw.—(*I. cinnamomeus*, Fr.) Abundant everywhere.

111. IRPEX TABACINUS, Fr.—Abundant on dead oak limbs.

112. IRPEX TULIPIFERÆ, Schw.—On dead *Carya*. Have never seen it on any other wood.

113. STEREUM ALBOBADIUM, Fr.—Very fine and abundant. Found only on hickory limbs.

114. STEREUM PAPYRINUM, Mont.—On fallen limbs.

115. STEREUM VERSICOLOR, Fr.—Abundant on dead limbs and the same as the *Stereum lobatum* of Curtis.

116. STEREUM VERSICOLOR, var. *petaliforme*.—An elongated variety very frequently found.

117. STEREUM OCHRACEOFLAVUM, Schw.—Quite common on small fallen limbs.

118. STEREUM FRUSTULOSUM, Fr.—Abundant on old logs.

119. STEREUM COMPLICATUM, Fr.—Common on dead limbs.

120. STEREUM SPADICEUM, Fr.—On rotten limbs. Rare.

121. STEREUM BICOLOR, Pers.—On rotten fallen limbs. Very fine. Common.

122. Schizophyllum commune, Fr.—Abundant here and all over the world.

123. Cercospora rosæcola, Pass.—Abundant on leaves of *Rubus villosus*.

124. Cercospora Smilacis, Thm.—On leaves of *Smilax*.

125. Panus stypticus, Fr.—Abundant on dead fallen wood.

126. Panus dorsalis, Bosc.—Only seen on decayed pine logs occasionally.

127. Trametes serpens, Fr.—I found this elegant species mostly on dead limbs of *Carpinus* not yet fallen, and not abundantly. There seem to be forms which might be referred to *T. rigida*, *T. sepium* and also to *P. Stevensii*. A well-marked variety occurs sparingly on *Vaccinum*.

128. Trametes hydnoides, Fr.—A very large species, in some respects resembling *Polyporus licnoides*, but covered with long hairs on upper side. Very scarce.

129. Trametes serialis, Fr.—Very rare. Beautiful. Some resembles *P. niphodes*, but pores smaller; border sometimes lilac-tinged.

130. Phlebia merismoides, Fr.—On rotten limbs. Smooth form.

131. Zygodesmus indigoferus, E. & E.—On the under side of decayed bark. Common.

132. Rosellinia aquila, Fr.—Abundant on fallen hickory limbs.

133. Rosellinia mammæformis, Pers.—On decayed logs. Not abundant.

134. Diatrype stigma, Hoffm.—Very common on decayed logs. Much like *D. platystoma*, but the latter has more prominent ostiola.

135. Diatrype tenuissima, Cooke.—On dead hickory limbs. Very abundant. Might be mistaken for *Eutypa*.

136. Diatrype tremellophora, Ell.—Very marked and different from *D. disciformis*, Fr., *vide* Ellis, in *American Naturalist*.

NEW FUNGI.

BY J. B. ELLIS AND DR. GEO. MARTIN.

Asterina purpurea, E. & M.—On living leaves of *Olea Americana*, near Jacksonville, Florida, winter of 1886. W. W. Calkins. Perithecia hypophyllous, convex-scutellate, scattered or gregarious, often collected along the midrib towards the base of the leaf, subastomous, of radiate-cellular structure, 130—150 μ in diam., margined with a narrow fringe of blanched purplish-black hyphæ, closely appressed to the surface of the leaf, which is stained of a reddish-purple tint for a little distance around: asci obovate, 30—35 x 18—22 μ, 8-spored; sporidia crowded, ovate-oblong or oblong-elliptical, 12—16 x 5—6 μ, hyaline, with the endochrome three times divided and often one of the cells with an imperfect longitudinal division.

DIMEROSPORIUM LANGLOISII, E. & M.—On living leaves of *Dianthera humilis*, Louisiana, November, 1885. Rev. A. B. Langlois, No. 73. Perithecia gregarious, depressed-spherical, rough, black, subastomous, 112—120 μ in diam., seated on a thin mycelium of brown, branching threads, forming small, dark-colored patches, thickly scattered over the upper surface of the leaf and giving it a mottled appearance; asci subsessile, oblong, often inequilateral or bulging on one side, 25—30 x 7—9 μ, without paraphyses; sporidia biseriate, clavate-oblong, yellowish-brown, 4-nucleate, 1-septate and slightly constricted at the septum, 9—10 x 3½—4 μ. Some of the perithecia contain oblong-cylindrical, 2-nucleate, subhyaline, 7—8 x 2 μ stylospores. The perithecia have a distinctly radiate-cellulose structure.

DIMEROSPORIUM NIMBOSUM, E. & M.—On living stems of *Smilax*, near Jacksonville, Florida, February, 1886. W. W. Calkins, No. 555. Mycelium composed of prostrate, brown, branching, septate threads, with short, erect branches, bearing oblong-clavate, 3—4-septate, brown conidia, 35—40 x 6—8 μ and longer (70—80 x 5—6 μ), erect, straight, septate, opaque, sterile branches, the whole forming orbicular, velutinous, black patches, ½—1 cm. across, mostly soon confluent, extending along and enveloping the stem for five cm. or more. The mycelium finally disappears, leaving a black, smooth, shining surface; perithecia collected mostly in the center of the spots, erumpent, conical, black, carbonaceo-membranaceous, rough, about one third millim. broad and high, sometimes imperfectly sulcate-striate around the prominent, mamose ostiolum; asci subcylindrical, 70—80 x 10—14 μ, nearly sessile and surrounded with abundant filiform paraphyses and containing eight biseriate, oblong-cylindrical, 16—20 x 5—6 μ sporidia, yellowish and 2-nucleate at first, finally brown and uniseptate and more or less constricted at the septum. The species will have to go in *Dimerosporium*, if that genus is to be retained, but its natural affinity is more with *Meliola*. *Mystrosporium aterrimum*, B. & C., appears to be the conidial stage.

STAGONOSPORA VIRENS, E. & M.—On leaves of *Quercus virens*, Green Cove Springs, Florida, February, 1885. Dr. Martin. Perithecia black, subglobose, clustered or scattered, hypophyllous, 130—160 μ in diam.; spores hyaline, ovate, ends acute, uniseptate, 15—16 x 4—6 μ.

PHYLLOSTICTA GOSSYPINA, E. & M.—On fading leaves of the cotton plant. Com., Prof. F. L. Scribner. Spots light rusty brown to pallid or nearly white, irregular, 3—5 millim. broad, surrounded by a broad reddish-purple margin, often discoloring most of the leaf; perithecia black, subglobose, collapsing, membranaceous, innate-erumpent, slightly prominent, epiphyllous, scattered, few in a spot, 65—95 μ in diam.; sporules hyaline, oval, ends obtuse, 2½—3½ x 1½—2½ μ.

PHYLLOSTICTA ARBUTIFOLIA, E. & M.—On living leaves of *Pyrus arbutifolia*, Newfield, N. J., Sept. 5th, 1885. Spots epiphyllous, small (1 millim. or less), white, scarcely showing at all on the under side of the leaf; perithecia mostly a single one in the center of the spot, subastomous, emergent, black, 70—8 μ in diam.; sporules subglobose, hyaline, 6—8 μ in the longest diam.

PHYLLOSTICTA LUDOVICIANA, E. & M.—On living leaves of *Quercus aquatica*, Louisiana, May, 1886. Rev. A. B. Langlois, No. 446. Perithecia amphigenous, but more prominent below, brown, flattened, erumpent, 150 μ in diam., scattered over large, red-brown areas of the leaf (mostly lateral) or on more definite oval or subangular spots, with a darker, slightly raised border; sporules oval, hyaline, 5—8 x 2—3 μ.

PHYLLOSTICTA ADUSTA, E. & M.—On orange leaves partly killed by frost, Green Cove Springs, Florida, March, 1886. Spots amphigenous, pallid or grayish, with a definite, narrow, yellowish-brown border, mostly marginal, 1—4 cm. across or extending along the entire margin of the leaf; perithecia amphigenous, black, subglobose, closely aggregated, sometimes confluent, covered by the cuticle, which is soon torn, 175—240 μ in diam.; sporules hyaline, oblong or subcylindrical, mostly with two or three nuclei, 10—16 x 4—7 μ; basidia 7—10 μ long. Differs from *P. marginalis*, Penz., in its larger sporules.

PHYLLOSTICTA CYRILLÆ, E. & M.—On leaves of *Cyrilla racemiflora*, Green Cove Springs, Florida, Feb. 2d, 1886. Spots large, covering the ends and edges of the leaves, red-brown at first, changing to grey-brown with age; perithecia black, subglobose, stomatous, deeply immersed, then erumpent, mostly epiphyllous, aggregated, 110—140 μ; sporules hyaline, ovoid, granular, 8—10 x 5—7 μ.

PHYLLOSTICTA AESCULI, E. & M.—On living leaves of *Aesculus glabra*, Missouri (Galloway, No. 76). Hypophyllous on large, indefinitely-limited spots and areas of the leaves; perithecia punctiform, minute (40—50 μ), scattered, brown; sporules oblong-cylindrical, hyaline, 3—4 x 1 μ. Differs from *P. sphæropsoidea*, E. & E., in its much smaller sporules.

PHYLLOSTICTA SACCHARINA, E. & M.—On living leaves of *Acer saccharinum*, Missouri (Galloway, No. 86). Spots amphigenous, definite, small (1—2 millim.), white, with a rusty-brown border, scattered irregularly; perithecia epiphyllous, but visible also below, lenticular, black, 100—120 μ in diam.; sporules oblong, 3½ – 4½ x 1—1¼ μ, hyaline. *Phyllosticta Pseudoplatani*, Sacc., as shown in *de Thuemen's Mycotheca*, No. 1789, has similar spots, but they are clustered on large, reddish-brown spots. The specimens in our copy are sterile, but the larger sporules (5—6 x 3 μ) would separate it. Of *P. fallax*, Sacc., which this must closely resemble, we have no specimen, but this too is said to have the sporules 5—6 x 3—3½ μ.

NEW LITERATURE.

BY W. A. KELLERMAN.

"THE BOLETI OF THE BIRMINGHAM DISTRICT." By W. B. Grove, B. A. *The Midland Naturalist*, October, 1886.

"UNE NOUVELLE MALADIE DU FROMENT." *Revue Mycologique*, October, 1886. The notice contains the diagnosis, by Dr. G. Passerini, of a new genus, as follows:

GIBELLINA, Passer., nov. gen.—Stroma vel subiculum matrici immersum, byssoideum, atro-griseum, primitis canescens, plus minus expansum, ex hyphis tenuibus fumoso-pellucidis intricatus formatum; perithecia

stromate insidentia vel immersa, contigua, contextu fibrosa, globosa, incollum subæquilongum crassiusculum rectum vel subinde flexuosum erumpentum, attenuata; asci elongato-clavati; paraphysati octospori; sporæ oblongæ didyme fuscescentes. Ab aliis generibus phæodidymus, stromate byssoides et peritheciis fibrosis, præcipue diversum. Amico carissimo Josepho Gibelli, in Archigymnasio Taurinensi Botanices, Professore Præclaro, dicatum. One species (*G. cerealis*, Passer.) is described, infesting dying culms of *Triticum vulgaris*.

"Fungi Gallici exsiccati, Centurie XXXIX*e*." C. Roumeguere. l. c.

"Champignous monstrueux des carrieres de phosphates de chaux du Quercy." C. Roumeguere. l. c.

"Champignous rares ou nouveaux de la Charente-Inferieure." Dr. G. Passerini et P. Brunaud.

"Fungi Australiensis, Auctore." Dr. G. Winter. l. c.

"Un Hyphomycete nouveau des feuilles vivantes du Jacquier (Strumella Darntiana, Roumeg. et Wint., nov. sp.) l. c.

"Ueber das massenhafte Vorkommen einer merkwuerdigen Ascomyceten species, Peziza (Ombrophila) Clavus Alb. et Schw., um Greiz." Von Dr. F. Ludwig. Deutsche Bototanische Monatsschrift, August and September, 1886.

"On the Morphology of Ravenlia glandulæformis." By G. H. Parker. From the "Proceedings of the Academy of Arts and Sciences, Vol. XXII" (issued September, 1886).

The investigation was undertaken at the suggestion of Dr. Farlow, the material (on *Tephrosia Virginiana*) having been furnished in 1879 by H. W. Ravenel. The paper deals with the morphology of the teleutosporic stage. The heads usually occupy depressions made by the uredospores. Each one is an umbrella-like mass, connected with the host by a moderate stalk. "Three regions may be defined in it: First, the spore-mass or brown, cap-like cluster of cells at the top; second, the cyst region, composed of cells, with their transparent walls connecting the spore-mass with the third, or stalk region, consisting of a series of compressed, parallel cells, passing from the cysts to the leaf-tissue below." * * * "In the course of the development of the head, no feature has presented itself which cannot be easily harmonized with the proposition that the head is a bundle of fused hyphæ-bearing spores." The paper (of fourteen pages) gives, fully, the mode of investigation of this species and the comparison of others of the same genus. It is also accompanied with twenty-one good figures, illustrating fully *R. glandulæformis*, B. & C., and partially *R. sessilis*, Berk., *R. Indica*, Berk., *R. glabra*, C. & K., and *R. stictica*, Bk. & Br.

"An Interesting Peronospora." By B. D. Halsted, *Botanical Gazette*, October, 1886.

The species reported (*P. graminicola*, Schw.) was known in this country only from Minnesota. Dr. Halsted finds it abundant this year, and very "vigorous," on *Setaria viridis*, at Ames, Iowa.

"Home-made Bacteria Apparatus." T. J. Burrill. l. c.

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